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ABSTRACT

This document presents data on the frequency with which Wisconsin capstone industrial education teachers perform their professional tasks and on the importance which they attach to these professional tasks. The data are presented in a series of tables and in two appendixes. This study is part of a larger study of junior, junior-senior, senior high school, and capstone teachers of industrial education subjects in Wisconsin for the purpose of reevaluating the BS., M.S. and Ed.S. degree programs in industrial education at the University of Wisconsin-Stout. (Author/DDO)

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STATEMENT OF THE PROBLEM

In these pages is reported a study of the professional tasks of Wisconsin capstone industrial education teachers.

More specifically, data are presented in response to two questions:

1. With what frequency do Wisconsin capstone industrial education teachers perform professional tasks?
2. What importance rating do Wisconsin capstone industrial education teachers assign to professional tasks?

RELATION TO OTHER STUDIES

In August of 1972, a paper was prepared which reviewed the development of the task analysis studies at UW-Stout up to that point in time.[1]

Since this study is based upon that development, the following outline of it is presented for information:

Introduction
Need for Role Descriptions
Program Development Model
Position Paper Implications
Identification of Tasks
Development of Task Analysis
  Survey Instruments
Processing the Data

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[1]Lawrence S. Wright, Development of Task Analysis Studies in Industrial Education; Graduate College, University of Wisconsin-Stout, Menomonie, Wisconsin, August, 1972.

Also, in the summer of 1972, a study was completed by six graduate students at UW-Stout. This paper examined the professional tasks of Wisconsin industrial arts teachers (1) who taught in any or all of grades 7, 8 and/or 9 whether they also taught in senior high school or not, (2) who taught in any of all of grades 10, 11 or 12 whether they also taught in junior high school or not, and (3) who taught Capstone industrial education courses.

In the belief that a more detailed study of those who taught only grades 7, 8 and/or 9; those who taught 7, 8 and/or 9 and 10, 11 and/or 12; those who taught 10, 11 and/or 12 but not Capstone courses; and those who taught Capstone courses without regard to other levels at which they might be teaching; this study was undertaken.

This study is Part V in the following series:

Part I:	Introduction to the Problem
Part II:	Frequency and Importance of Their Professional Tasks as Reported by Wisconsin Junior High School Industrial Arts Teachers
Part III	Frequency and Importance of Their Professional Tasks as Reported by Wisconsin Junior-Senior High School Industrial Arts Teachers
Part IV:	Frequency and Importance of Their Professional Tasks as Reported by Wisconsin Senior High School Industrial Education Teachers
Part V:	Frequency and Importance of Their Professional Tasks as Reported by Wisconsin Capstone Industrial Education Teachers

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[2]Daniel Fara, et.al., "Professional Tasks of the Wisconsin Industrial Education Teacher" (unpublished Plan B investigation, University of Wisconsin-Stout, 1972.)

Part VI: Frequency and Importance of Their Professional Tasks as Reported by All Wisconsin Secondary School Industrial Education Teachers

Part VII: Significant Differences Between Selected Wisconsin Industrial Education Teacher Groups with Respect to (1) Frequency and (2) Importance of Their Professional Tasks

Part VIII: Importance of Industrial Education Teacher's Professional Tasks as Seen by a Jury of Selected Leaders in Education, Together with Significant Differences Between Responses of Selected Wisconsin Industrial Education Teacher Groups and the Jury

DISTRIBUTION OF CAPSTONE INDUSTRIAL EDUCATION TEACHERS BY GRADE LEVEL

In the effort to learn at what grade level Wisconsin industrial education teacher-respondents were teaching, they were asked to respond to the following item:

> "Check <u>each</u> of the levels in which you are teaching one or more industrial education subjects this year":
>
> ___6th grade ___8th grade ___10th grade ___12th grade
>
> ___7th grade ___9th grade ___11th grade ___Capstone

Data are presented in Table 1 which show the distribution among various grades of the industrial education teaching assignment of 146 capstone teachers. It may be noted that in a very few cases they may also teach a junior high school grade, the most predominant of which is 9th grade. (This may frequently be the freshman work in a four-year high school.) The largest number of capstone teachers, 56 or 38.4 percent, teach in each of the grades 10, 11 and 12.

TABLE 1

Numbers and Percent of Wisconsin Industrial Education Teachers Who Reported Teaching One or More Capstone Industrial Education Courses During the 1971-72 Academic Year

Junior High School Grades	Senior High School Grades: 10		11		12		10 and 11		10 and 12		11 and 12		10, 11 and 12		Totals	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
7																
8											2	1.4*	1	0.7	3	2.1
9					2	1.4							42	28.8	44	30.1
7 and 8					1	0.7					1	0.7			2	1.4
7 and 9																
8 and 9							1	0.7	1	0.7			5	3.4	7	4.8
7, 8 and 9											1	0.7	3	2.1	4	2.7
Capstone			2	1.4	9		1	0.7	1	0.7	17	11.6	56	38.4	86	58.9
Totals			2	1.4	12	8.2	2	1.4	2	1.4	21	14.3	107	73.3	146	100.0

*Table is read as follows: Two capstone teachers, or 1.4 percent, reported teaching one or more industrial education capstone courses and also reported teaching industrial education subjects in grade 8 of the junior high school grades and in grades 11 and 12 of the senior high school grades during the 1971-72 academic year.

TEACHING EXPERIENCE

Respondents were asked to indicate within categories the number of years of teaching experience including the current year (1971-72). Data presented in Table 2 show a farily uniform distribution within the categories ranging from 17 or 12.0 percent with from 1 to 2 years to 41 or 28.8 percent with from 3 to 5 years of experience.

TABLE 2

Teaching Experience of 142 Wisconsin Capstone Teachers

Teaching Experience in Years	Number of Teachers	Percent
1 - 2	17	12.0
3 - 5	41	28.8
6 - 10	39	27.5
11 - 15	18	12.7
More than 15	27	19.0
Total	142	100.0

FREQUENCY RATINGS

Data are presented in Appendix A which show the frequency rating assigned each first-level, second-level and third-level task as reported by those teaching capstone industrial education subjects ordinarily at the 12th grade levels in Wisconsin during the 1971-72 academic year. These ranks are assigned on the basis of the median value. The inter-quartile range is a measure of agreement among those responding.

It may be of interest to note the ranking by capstone industrial education teachers of the frequency with which they perform first-level tasks. (It may be recalled that these are cumulations of their responses to the third-level tasks.) These data are presented in Table 3.

TABLE 3

Ranking of Frequency of First-Level Tasks
by Capstone Industrial
Education Teachers

Rank	Code Number	First-Level Task
1	5.0	Facilitate Learning
2	4.0	Nurture Humaneness
3	6.0	Manage Learning Environment
4	3.0	Design Instruction
5	9.0	Evaluate Instruction
6	10.0	Evaluate Programs
7	1.0	Improve Individual's Competencies
8	2.0	Design Programs
9	7.0	Provide Professional Service
10	8.0	Utilize Research

The summary of the distribution of frequency ratings by first-, second-, and third-level tasks may be seen in Table 4.

IMPORTANCE RATINGS

Data are presented in Appendix B which show the importance rating assigned each first-level, second-level and third-level task as reported by those teaching capstone industrial education subjects ordinarily at the 12th grade level in Wisconsin during the 1971-72 academic year. The ranks

TABLE 4

Interpretation of Median (Mdn) Values of Frequency Ratings by Wisconsin Capstone Industrial Education Teachers

Range of Median Values	Frequency Interpretation	Tasks					
		First-Level		Second-Level		Third-Level	
		N	%	N	%	N	%
4.500 and higher	Weekly or More Often	1	10	9	15.7	55	16.8
3.500 - 4.499	About Once per Grading Period (6-9 weeks)	4	40	15	26.3	87	26.6
2.500 - 3.499	About Once per Semester	3	30	17	29.8	76	23.2
1.500 - 2.499	About Once per year	2	20	11	19.2	80	24.4
1.499 and lower	Do Not Perform	0	0	5	8.7	29	8.8

are assigned on the basis of the median value. The interquartile range is a measure of agreement among those responding.

It may be of interest to note the ranking by capstone industrial education teachers of the importance they attach to the first-level tasks. (It will be recalled that these are cumulations of their responses to the third-level tasks.) Data are presented in Table 5.

The summary of the distribution of importance ratings by first-, second-, and third-level tasks may be seen in Table 6.

TASKS RECEIVING LOW RATINGS

An examination was made of the tasks which received low ratings. Low ratings for frequency were those reported as "do not perform" by the median value of the respondents. Low ratings for importance were those reported as "unimportant" or as "slightly important" by the respondents. These tasks are identified in Table 7.

TABLE 5

Ranking of Importance of First-Level Tasks
by Capstone Industrial
Education Teachers

Rank	Code Number	First-Level Tasks
1	5.0	Facilitate Learning
2	6.0	Manage Learning Environment
3	4.0	Nurture Humaneness
4	1.0	Improve Individual's Competencies
5	3.0	Design Instruction
6	10.0	Evaluate Programs
7	9.0	Evaluate Instruction
8	2.0	Design Programs
9	7.0	Provide Professional Service
10	8.0	Utilize Research

TABLE 6

Interpretation of Median (Mdn) Values of Importance Ratings by Wisconsin Capstone Industrial Education Teachers

Range of Median Values	Importance Interpretation	Tasks					
		First-Level		Second-Level		Third-Level	
		N	%	N	%	N	%
4.500 and higher	Essential	0	0	7	12.2	55	16.8
3.500 - 4.449	Very Important	9	90	32	56.1	160	48.9
2.500 - 3.499	Moderately Important	1	10	17	29.8	96	29.3
1.500 - 2.499	Slightly Important	0	0	1	1.7	15	4.5
1.499 and lower	Unimportant	0	0	0	0	1	0.3

TABLE 7

Tasks Receiving Low Frequency and/or Importance Ratings by Capstone Industrial Education Teachers

Code Number	Task	Do Not Perform	Slightly Important
	THIRD-LEVEL TASKS		
2.2.8	Select published taxonomy or develop a taxonomy of industry	X	
2.3.1	Identify various group cultures that may compose target populations for programs	X	X
7.3.3	Serve as class advisor	X	X
7.3.4	Sponsor student club actitivies	X	
7.5.1	Organize and conduct workshops and in-service educational programs	X	
7.5.2	Develop adult evening extension programs	X	
7.5.3	Initiate remedial and summer programs for students	X	
7.5.4	Serve as advisor to educational suppliers in development of new resources and instructional materials	X	X
7.6.2	Write reviews of new tests, instructional aids, and media for education journals	X	X
7.6.3	Develop written instructional materials for publication	X	
7.7.2	Prepare the class for the arrival of student teachers	X	
7.7.3	Assign teaching responsibilities to student teacher	X	
7.7.4	Create situations so that the student teacher can initiate the instruction activities	X	

Code Number	Task	Do Not Perform	Slightly Important
	THIRD-LEVEL TASKS		
7.7.5	Hold conferences with student teacher regarding his performance, progress and problems	X	
7.7.7	Observe student teachers' performance in the classroom	X	
8.1.3	Estimate and evaluate factors such as time, cost and value as a basis for selection of a research problem		X
8.2.2	Write a rationale for a research study including a review of literature	X	X
8.2.4	Select and describe the research design to be used in a proposed research study	X	
8.2.5	Select a population for a particular research study	X	X
8.2.7	Develop a management strategy for the control of the research study	X	X
8.2.8	Prepare a budget estimate in fiscal terms for a research study	X	X
8.4.1	Complete preparation of preliminary draft of research report, e.g.: introduction, methods, body, conclusions, implications, bibliography, appendices	X	
8.4.2	Formally review and revise preliminary draft of research report	X	X
8.4.3	Complete final draft of research report	X	X
8.5.3	Organize and set-up pilot programs in cooperation with other researchers	X	X
8.6.2	Inspect research reports for adequate descriptions of the major elements of the research study		X

Code Number	Task	Do Not Perform	Slightly Important
	THIRD-LEVEL TASKS		
8.6.3	Evaluate the sampling procedures of research reports	X	X
8.6.4	Assess the validity and reliability of research procedures	X	X
8.6.6	Evaluate the conclusions of a research report	X	
9.2.8	Use computer to assist in analyzing test results	X	X*
9.3.5	Administer standardized tests	X	
	SECOND-LEVEL TASKS		
7.5	Develop programs of professional service	X	
7.6	Contribute to literature of the field through technical and/or professional writing	X	
7.7	Supervise student teachers	X	
8.2	Prepare proposals for researching a problem	X	
8.4	Write research reports	X	X
	FIRST-LEVEL TASKS		
	No first-level tasks were reported as "do not perform" or "unimportant."		

*This task was rated as "unimportant."

SUMMARY

Data has been presented which show the frequency with which Wisconsin capstone industrial education teachers report that they perform their professional tasks.

Data has also been presented which show the importance which Wisconsin capstone industrial education teachers attach to their professional tasks.

These data are part of a larger study of junior, junior-senior, senior high school and capstone teachers of industrial education subjects in Wisconsin for the purpose of re-evaluating the B.S., M.S., and Ed.S. degree programs in industrial education at UW-Stout.

APPENDIX A

FREQUENCY OF TASKS PERFORMED

Tasks of Wisconsin Capstone Industrial Education Teachers Ranked by Median (Mdn) Value of Their Response to "Frequency of Performance" and Including Interquartile Range (IQR)

Rank Order	Median (mdn)	IQR	Code	Tasks
1	4.522	1.502	5.0	FACILITATE LEARNING
1	4.619	1.328	5.5	Teach the substantive content of the field.
1	4.825	0.724	5.5.3	Provide experiences for some students to prepare them for entry into appropriate industrially related occupations or to develop a base for advanced occupational education
2	4.800	0.899	5.5.5	Provide experiences which contribute to the teaching of students to use processes, e.g.: perceiving, communicating, learning, decision-making, organizing, co-responding, creating, valuing, problem-solving
3	4.576	1.371	5.5.1	Provide experiences which will contribute to the student's understanding of industry as a major element in our culture
4	4.538	1.340	5.5.4	Provide experiences which some students may use as a base for developing avocational activities
5	4.166	1.506	5.5.2	Provide exploratory experience related to industry which will provide some students a basis for selecting an occupation and will provide all students respect for the pursuits of others
2	4.584	1.378	5.3	Interact with students in a positive manner.
1	4.958	0.541	5.3.3	Express interest in students
2	4.863	0.636	5.3.8	Express enthusiasm for your students and the subject matter
3	4.852	0.647	5.3.11	Use knowledge of students as a basis for positive interaction during instruction
4	4.735	1.450	5.3.1	Use processes of perceiving, communicating, knowing, co-responding patterning, decision-making, creating, valuing, problem solving, and learning in interacting with students
5	4.722	1.361	5.3.10	Demonstrate an attitude of fairness and commitment on issues important to students
6	4.678	1.053	5.3.2	Establish atmosphere for positive group interaction
7	4.533	1.191	5.3.4	Make provision for student input into instruction

Rank Order	Median (mdn)	IQR	Code	Tasks
8	4.350	1.262	5.3.5	Plan individualized instruction with students
9	4.346	1.108	5.3.7	Provide students with clear understandings of what is expected of them and what they can expect from their teacher
10	3.833	1.500	5.3.6	Use student interests in planning student activity
11	3.062	2.437	5.3.9	Recognize and intereact with subcultures unique to the student population
3	4.559	1.518	5.2	Motivate students.
1	4.900	0.600	5.2.2	Win the students' attention and maintain level of arousal
2	4.850	0.650	5.2.3	Vary classroom routine to prevent monotony and boredom
3	4.722	0.986	5.2.8	Provide students immediate feedback to tests
4	4.571	1.452	5.2.6	Reward student achievement
5	4.400	2.230	5.2.7	Recognize and react to behavior which merits no reward
6	4.285	1.475	5.2.5	Recognize and encourage evidences of response to internal motivation
7	3.857	1.812	5.2.4	Recognize and encourage evidences of response to external motivation
8	3.166	2.333	5.2.1	Determine the entering dispositions of individual students
4	4.556	1.515	5.1	Execute instructional plans and strategies.
1	4.894	0.605	5.1.4	Present lessons and related demonstrations
2	4.886	0.613	5.1.5	Be aware of whether students are working safely and take appropriate preventative and corrective measures
3	4.763	1.131	5.1.1	Identify individual needs of students
4	4.705	1.144	5.1.3	Make students aware of instructional intent and proposed outcomes of instruction
5	4.400	1.154	5.1.6	Use educational resources in executing instructional plans
6	3.150	1.441	5.1.7	Conduct field trips and other outside-class activities
7	2.900	1.500	5.1.2	Find out what students expect from the instruction

Rank Order	Median (mdn)	IQR	Code	Tasks
5	4.106	7.781	5.4	Adjust plans and strategies based on observed feedback from students.
1	4.705	1.144	5.4.6	Capitalize on spontaneous student interests
2	4.300	1.749	5.4.1	Be sensitive to solicited and unsolicited student feedback
3.5	4.250	1.399	5.4.8	Be sensitive to non-verbal feedback
3.5	4.250	1.954	5.4.5	Recognize and respond to external factors which influence planned instruction
5	4.100	1.466	5.4.2	Modify instructional methods in the light of student feedback
6	4.071	1.963	5.4.4	Revise time allocations for instructional plans and strategies based on student feedback
7	4.000	1.364	5.4.3	Adjust the learning environment (facilities) to provide optimum learning conditions
8	2.800	1.982	5.4.7	Make final decisions on placement of instructional sequences for optimum effectiveness

Rank Order	Median (mdn)	IQR	Code	Tasks
2	3.970	2.052	4.0	NURTURE HUMANENESS
1	4.596	1.376	4.1	Nurture humaneness with students.
1	4.980	0.540	4.1.5	Take time to listen to students and acknowledge their ideas and commitments as being worthy of expression
2	4.869	0.630	4.1.10	Provide personal guidance to students
3	4.857	0.642	4.1.2	Admit that teachers also make mistakes and learn from them
4	4.722	1.111	4.1.9	Encourage students to know that they are respected as individuals
5	4.700	0.933	4.1.4	Encourage, recognize and acknowledge original ideas of students--even though imperfect and unfinished
6	4.642	1.142	4.1.11	Extend the positive student-teacher relationship to include informal contacts
7	4.600	1.633	4.1.1	Encourage students to think of alternatives and to recognize knowledge as imperfect, incomplete, and tentative
8	4.525	1.395	4.1.3	Maintain atmosphere where adventure in learning is encouraged without fear of consequences of failure
9	3.875	1.770	4.1.8	Develop group and team learning situations to foster in students a mutual concern for one another
10	3.866	1.412	4.1.6	Help students interpret their relationship to their environment
11	3.071	2.946	4.1.7	De-emphasize inter-student competition in the classroom as a basis for student achievement
2	4.313	1.864	4.4	Nurture humaneness to one's self.
1	4.538	1.706	4.4.1	Employ teacher traits in balance between those required for individual self-fulfillment and those required for successful teaching
2	3.833	1.925	4.4.2	Reassess personal objectives and take action to continue growth towards self-actualizing
3	3.852	1.919	4.2	Nurture humaneness with the school staff.
1	4.895	0.604	4.2.5	Employ tact and judgment in interacting with other school staff members
2	4.375	1.395	4.2.1	Accept assistance from and give assistance to fellow staff members
3	3.714	1.809	4.2.4	Serve on and cooperate with school staff committees

Rank Order	Median (mdn)	IQR	Code	Tasks
4	3.666	1.979	4.2.2	Obtain and lend assistance to school projects being developed by other school staff members
5	3.375	1.749	4.2.6	Offer recommendations in matters of school policy
6	3.125	1.457	4.2.3	Participate in school staff social events
4	2.976	1.988	4.3	Nurture humaneness with parents and community.
1	3.714	2.458	4.3.1	Participate in community activities and service organizations
2	3.571	2.342	4.3.5	Identify and respect goals parents have for their children
3.5	3.000	1.000	4.3.3	Participate in parent-teacher functions
3.5	3.000	1.444	4.3.4	Make provisions for personal contacts with parents concerning the progress of their children
5	2.875	1.833	4.3.2	Evidence interest in graduated students
6	2.800	2.270	4.3.7	Work with community service personnel, e.g.: librarians, social workers, clergy, training schools
7	2.266	2.004	4.3.6	Become familiar with services provided by the community, e.g.: public library, museums, other schools, cultural center, etc.

Rank Order	Median (mdn)	IQR	Code	Tasks
3	3.919	2.504	6.0	MANAGE LEARNING ENVIRONMENT
1	4.644	1.555	6.3	Provide for maintenance.
1	4.857	0.642	6.3.2	Diagnose maintenance problems in tools and equipment
2	4.705	1.252	6.3.4	Test and adjust tools and equipment prior to returning them to use after maintenance
3	4.400	2.102	6.3.1	Develop and carry out a routine preventative maintenance schedule
4	3.500	1.395	6.3.3	Provide for maintenance by servicing or referral for service as appropriate
2	4.630	1.425	6.5	Respond to social-emotional climate.
1	4.977	0.522	6.5.5	Be responsive to human needs of student
2	4.868	0.631	6.5.2	Demonstrate firmness, fairness and consistency in dealing with discipline problems
3	4.750	1.000	6.5.4	Use rewards and punishment to control deviant behavior
4	4.733	1.179	6.5.7	Establish rapport and empathy with students
5	4.050	1.525	6.5.3	Develop alternate strategies for alleviating conditions which cause discipline problems
6	3.583	2.406	6.5.6	Use self-evaluation techniques regarding your interrelationship with students
7	3.500	2.000	6.5.1	Identify internal and external causes of discipline problems
3	4.534	2.363	6.4	Maintain records and filing systems.
1	4.920	0.580	6.4.1	Keep attendance records for each class taught
2	4.794	0.813	6.4.2	Keep student progress records for each class
3	4.763	0.881	6.4.5	Keep records of student grades for each class taught
4	4.583	2.841	6.4.4	Keep a record of purchase orders and inventories
5	4.416	1.897	6.4.7	Keep an up-to-date industrial and educational supply catalog file
6	2.250	2.187	6.4.3	Keep equipment and tool inventories
7	1.500	2.071	6.4.6	Keep records of federal and state funding programs

Rank Order	Median (mdn)	IQR	Code	Tasks
4	4.050	1.759	6.6	Establish physical conditions conducive to learning.
1	4.800	1.899	6.6.1	Maintain control of comfortable temperature, lighting, and noise levels in classrooms and laboratories
2	4.500	1.416	6.6.3	Establish classroom procedures which avoid confusion and provide freedom of movement to students
3	3.642	1.476	6.6.2	Take actions to enhance the room interior with displays, bulletin boards
5	3.079	2.014	6.2	Requisition and receive supplies and materials.
1	4.000	1.476	6.2.4	Receive and check in supplies and materials
2	3.333	1.690	6.2.3	Order new educational materials and supplies
3	2.500	1.458	6.2.1	Take inventory of supplies and materials
4	2.235	1.411	6.2.2	Prepare budgets for formal approval
6	2.433	1.905	6.1	Plan for and organize the facilities needed for the program.
1	3.900	1.999	6.1.4	Consult catalogs of industrial and educational supplies for specification of equipment available
2	3.750	2.410	6.1.3	Plan layout for effective space utilization to meet program needs
3	2.666	1.494	6.1.5	Prepare a list of specific equipment and tools appropriate to program level and needs
4	2.400	1.133	6.1.7	Make an immediate and long range plan for acquisition of equipment and tools
5	2.321	1.239	6.1.8	Prepare, submit, and defend budget requests for equipment and tools
6	2.250	2.166	6.1.6	Write specifications for equipment and tools
7	2.000	0.750	6.1.2	Write a program statement for your shop or laboratory
8	1.681	1.070	6.1.1	Identify and develop an industrial education program and the facility to house it

Rank Order	Median (mdn)	IQR	Code	Tasks
4	3.638	2.182	3.0	DESIGN INSTRUCTION
1	4.581	1.278	3.5	Select teaching activities and strategies.
1	4.863	0.636	3.5.2	Integrate learning and teaching activities into instructional plans
2	4.656	1.286	3.5.3	Make decisions concerning the extent to which the instruction is to be individualized
3	4.181	1.256	3.5.1	Plan strategies for teaching including meeting the needs of special groups
2	4.209	1.743	3.4	Develop (or identify) student learning activities appropriate to each behavioral objective (make the content operational).
1	4.869	0.630	3.4.6	Plan experiences which will contribute to teaching students how to use processes, e.g.: perceiving, communicating, learning, decision making, organizing, co-responding, creating, valuing, problem solving
2	4.541	1.395	3.4.5	Plan experiences which some students may use as a base for developing avocational activities
3	4.450	1.205	3.4.4	Plan experiences for some students which will prepare them for entry into industrially related occupations or to develop a base for advanced occupational education
4	3.937	2.291	3.4.2	Plan experiences which will contribute to the students' understanding of industry as a major element in our culture
5	3.833	1.428	3.4.7	Develop alternative learning activities to provide for individual student needs
6	3.437	1.656	3.4.3	Plan exploratory experiences related to industry which will provide some students a base for occupational choice and all students a respect for the pursuits of others
7	3.000	0.875	3.4.1	Consult resources to identify learning activities
3	3.909	1.990	3.9	Prepare lesson plans for group and individualized instruction.
1	4.416	1.604	3.9.7	Sequence presentation of instructional materials
2	4.312	1.331	3.9.2	Identify and select learning activities for students
3	4.041	1.444	3.9.4	Identify and select appropriate learning resources

Rank Order	Median (mdn)	IQR	Code	Tasks
4	3.777	1.597	3.9.5	Validate content against levels within domains for lesson plans
5	3.750	2.291	3.9.6	Keep records of lessons planned and suggestions for improvement
6	3.166	3.297	3.9.3	Identify and select appropriate teacher activities
7	3.000	2.714	3.9.1	Write objectives for lesson plans
4	3.707	2.056	3.6	Identify and prepare instructional resources.
1	4.940	0.559	3.6.5	Prepare instructional materials
2	3.750	2.041	3.6.1	Review and select personnel resources
3	3.500	1.212	3.6.4	Review and select written resources for instruction
4	3.388	1.746	3.6.2	Review and select industrial resources
5	2.375	1.312	3.6.3	Review and select audio-visual resources
5	3.646	2.077	3.7	Develop a strategy for evaluating instruction.
1	4.300	1.200	3.7.4	Plan for written and manipulative performance tests
2	4.000	1.633	3.7.2	Formulate a grading policy and plans for making it known to students
3.5	3.500	1.799	3.7.1	Decide whether evaluation will employ norm-based or mastery grading procedures
3.5	3.500	2.925	3.7.3	Plan for self-evaluation techniques to be used by students
5	2.409	1.753	3.7.5	Plan for student evaluation of course
6	3.586	2.375	3.1	Write performance objectives for each course.
1	4.625	1.187	3.1.2	Identify student behavior or product of student behavior
2	4.300	1.316	3.1.4	Identify performance standard for performance objectives
3	3.812	2.006	3.1.3	Identify conditions under which student behavior modification will take place
4	2.333	1.513	3.1.1	Identify student population who will receive instruction
5	2.250	1.875	3.1.5	Write the performance objective at the appropriate level and domain

Rank Order	Median (mdn)	IQR	Code	Tasks
7	3.244	1.875	3.3	Validate content against domains and against levels within domains.
1	4.214	1.709	3.3.3	Make adjustments to content within domains to obtain needed balance
2	3.650	1.481	3.3.6	Make any needed adjustments to content by levels within each domain
3	3.100	2.600	3.3.5	Observe whether the desired levels within domains are represented and what their balance is
4	3.000	1.803	3.3.4	Decide which levels within each domain should be represented and the balance of content that should be devoted to each
5	2.863	1.194	3.3.1	Decide whether each domain should be represented and the balance of content which should be devoted to each
6	2.500	1.500	3.3.2	Observe that the desired domains are represented and what their balance is
8	3.154	2.175	3.2	Organize objectives into appropriate sequences.
1	3.750	1.568	3.2.2	Group and sequence performance objectives into appropriate units of instruction
2	2.250	1.637	3.2.1	Identify which objectives are dependent on other objectives for their attainment
9	2.204	1.055	3.8	Organize and complete the course of study.
1	2.600	1.943	3.8.3	Prepare a time-range plan suggesting a range of time allotted to each unit of instruction
2	2.208	1.092	3.8.1	Write introduction to course of study.
3	2.119	0.666	3.8.2	Write course description
4	2.000	0.600	3.8.4	Arrange for the preparation of total course of study copy and subsequent distribution

Rank Order	Median (mdn)	IQR	Code	Tasks
5	3.514	2.567	9.0	EVALUATE INSTRUCTION
1	4.286	1.500	9.1	Assess whether students have assimilated the material presented.
1	4.300	1.316	9.1.1	Use the evaluation policy which was previously made known to students
2	4.285	1.687	9.1.3	Apply methods to be used to evaluate instruction
3	4.250	1.583	9.1.2	Determine whether students met performance standards
2	3.745	1.734	9.4	Determine efficiency and effectiveness of instruction.
1	4.454	1.139	9.4.5	Appraise student performance in relation to instructional goals
2	4.000	0.899	9.4.1	Analyze and interpret results of instructional measurement
3	3.625	1.455	9.4.6	Determine whether students are generally happy with the instruction received
4	3.500	1.885	9.4.2	Consult with colleagues regarding assessment of your teaching
5	3.071	2.550	9.4.4	Compare pretest and posttest results
6	2.600	1.208	9.4.3	Analyze student evaluation of instruction
3	2.893	2.933	9.3	Administer evaluative experiences.
1	4.133	0.972	9.3.3	Administer written and manipulative performance tests
2	3.750	3.762	9.3.4	Maintain a daily instruction evaluation log book
3	2.700	2.098	9.3.2	Conduct student self-evaluation procedures
4	2.000	1.933	9.3.1	Administer pretests and posttests
5	1.423	1.252	9.3.5	Administer standardized tests
4	2.739	2.789	9.2	Construct and evaluate measuring instruments and procedures.
1	4.125	0.937	9.2.2	Formulate devices to measure cognitive (knowledge-type) behavior
2	3.750	3.425	9.2.4	Formulate devices to measure psychomotor (manipulative skill type) behavior
3	3.700	1.450	9.2.7	Evaluate tests in terms of useability, objectivity, difficulty, and discrimination
4	2.666	2.675	9.2.5	Develop pretests and posttests
5	2.642	1.714	9.2.1	Devise self-evaluation techniques for use by students
6	2.100	1.875	9.2.6	Analyze test instrument validity and reliability
7	2.000	1.916	9.2.3	Formulate devices to measure affective behavior (e.g., attitudes and values)
8	1.041	0.541	9.2.8	Use computer to assist in analyzing test results

Rank Order	Median (mdn)	IQR	Code	Tasks
6	2.903	1.991	10.0	EVALUATE PROGRAMS
1	3.524	1.905	10.4	Determine effectiveness of program implementation.
1	4.041	1.218	10.4.4	Assess adequacy of instructional materials for carrying out learning activities at the program level
2	3.928	1.850	10.4.2	Evaluate quality of instruction and teacher-student interrelationship within the program
3	3.777	1.885	10.4.5	Assess appropriateness of learning activities to the program
4	3.150	1.718	10.4.6	Review sequences of courses comprising the program
5.5	2.750	1.604	10.4.1	Assess validity of original sources of curriculum content at the program level
5.5	2.750	1.791	10.4.3	Determine appropriateness of course objectives in fulfilling student needs at the program-level
2	3.234	1.989	10.3	Determine output characteristics of students.
1	4.676	1.159	10.3.1	Assess the degree of student achievement of program objectives
2	3.666	1.441	10.3.5	Determine whether students enjoy the curriculum and are generally happy with it
3	2.944	1.333	10.3.4	Compare present student achievements with previous student achievements in the program
4	2.400	1.300	10.3.3	Determine the degree to which the industrial education program satisfies societal, industrial and individual needs
5	2.194	1.145	10.3.2	Review program-level follow-up studies to ascertain the usefulness of material learned
3	2.719	1.783	10.2	Assess factors influencing program.
1	3.750	1.404	10.2.3	Review adequacy and utilization of facilities for program
2	2.750	1.666	10.2.5	Determine the degree of articulation with general, college preparatory and vocational programs
3	2.625	1.430	10.2.4	Determine utilization made of community resources in program-level development
4	2.464	1.410	10.2.1	Determine interests, abilities and experiences of students entering the program
5	1.937	1.799	10.2.2	Review teacher competencies with respect to program-level goals

Rank Order	Median (mdn)	IQR	Code	Tasks
4	2.275	1.867	10.1	Collect information at the program-level.
1	3.000	2.466	10.1.3	Select (or design) and administer cognitive (knowledge) tests for evaluation of program
2	2.642	1.633	10.1.6	Consult advisory committees to determine quality of instructional program
3	2.307	1.419	10.1.7	Interact with and evaluate professional program-level curriculum viewpoints
4	2.200	2.131	10.1.2	Design and administer forms for evaluation of programs by students
5	2.000	1.800	10.1.4	Select (or design) and administer tests of attitudes for evaluation of the program
6	1.944	1.633	10.1.1	Conduct program-level follow-up study
7	1.800	1.875	10.1.5	Select (or design) and administer tests of psychomotor abilities for evaluation of programs

Rank Order	Median (mdn)	IQR	Code	Tasks
7	2.885	2.262	1.0	IMPROVE INDIVIDUAL'S COMPETENCIES
1	3.896	1.999	1.1	Provide for re-generation and development of competencies.
1	4.583	1.291	1.1.3	Independently accept and solve technical and other problems related to teaching assignments
2	3.900	2.077	1.1.1	Regenerate teaching skills and strategies
3	3.642	2.142	1.1.4	Accept professional assignments
4	3.583	1.825	1.1.5	Improve skills of interaction with others
5	3.330	2.136	1.1.2	Improve your technical skills
2	2.763	2.143	1.3	Use self-evaluation techniques.
1	3.750	2.425	1.3.2	Participate in self-evaluation techniques
2	3.687	1.691	1.3.4	Periodically self-reflect and evaluate education and life philosophies.
3	2.437	1.531	1.3.3	Consult supervisory and administrative evaluations for self-improvement
4	1.954	2.142	1.3.1	Select a teaching position for which you feel qualified
3	2.385	1.871	1.2	Keep up with development in the field.
1	4.750	1.024	1.2.2	Read current professional literature for self-improvement
2	3.071	1.053	1.2.1	Attend in-service seminars and workshops
3	3.000	2.066	1.2.5	Visit industries and consult with professional and technical personnel
4	2.235	1.941	1.2.6	Subscribe to educational and technical journals
5	2.250	1.125	1.2.3	Pursue further formal technical and professional education for self-improvement
6	2.119	0.682	1.2.4	Maintain membership in professional and technical organizations

Rank Order	Median (mdn)	IQR	Code	Tasks
8	2.638	1.920	2.0	DESIGN PROGRAMS
1	3.229	2.009	2.4	Analyze the study of society, industry and the individual to identify the problems and human needs toward which industrial education can make contributions.
1	3.727	1.890	2.4.3	Examine previously proposed solutions and use or propose solutions to problems and ways to meet human needs through the program
2	3.722	1.444	2.4.1	Identify societal, industrial and individual problems toward which industrial education can contribute
3	3.055	1.600	2.4.4	Identify the jobs that need to be done toward which an industrial education program can contribute
4.5	2.833	2.222	2.4.6	Structure the content from which to draw for program-level curriculum development
4.5	2.833	2.250	2.4.2	Identify human needs including those of differing cultures
6	2.500	1.750	2.4.5	Detail each job to be done in industrial education in terms of tasks to be performed for program-level curriculum development
2	3.103	2.081	2.2	Study the institution of industry within our society as a source of the body of knowledge for industrial education.
1	4.800	0.774	2.2.1	Read magazines and journals that focus on industry as part of the study of the institution of industry
2	3.700	1.733	2.2.6	Identify past, present and probably future impacts of industry on society
3	3.428	1.730	2.2.2	Decide upon basic functions of industry to be studied in the program
4	3.200	2.225	2.2.5	Develop and maintain an up to date industrial resource file
5	3.041	1.250	2.2.4	Consult available industrial personnel as part of the study of the institution of industry
6	3.000	1.364	2.2.3	Visit and observe representative industries as a source of the body of content for industrial education
7	2.687	1.513	2.2.7	Study labor in industry as a basis for program-level curriculum development
8	2.307	1.419	2.2.9	Establish tentative program-level goals for industrial education in relation to industry

Rank Order	Median (mdn)	IQR	Code	Tasks
9	1.423	1.871	2.2.8	Select published taxonomy or develop a taxonomy of industry
3	2.760	1.963	2.1	Study society in general and its problems in particular to maintain and improve the relevance of industrial education goals to society.
1	3.785	1.777	2.1.5	Relate current problems to industrial education programs
2	3.428	1.968	2.1.6	Identify contributions that industrial education can make toward the solution of societal problems
3	3.166	1.919	2.1.8	Try promising approaches and alternatives to meeting the needs of society through industrial education programs
4	3.000	2.604	2.1.1	Read and interpret current and historical literature for program-level input
5	2.750	2.333	2.1.3	Make judgments about cause and effect in relating societal problems to industrial education programs
6	2.437	1.843	2.1.7	Consider alternative solutions to societal problems at the program planning level
7	2.400	1.400	2.1.2	Listen to and interact with presentations about current status and the future as input to program-level curriculum development
8.5	2.250	1.303	2.1.4	Project trends and make predictions based on societies' problems and needs for program-level curriculum development
8.5	2.250	1.187	2.1.10	Suggest program-level improvements in industrial education based on societal needs
10	2.214	1.250	2.1.9	Establish tentative program-level goals for industrial education in relation to societal needs
4	2.580	2.168	2.7	Develop a plan for continual revision and improvement of programs.
1	4.400	1.208	2.7.3	Keep up with new literature related to general and industrial education for program improvement
2	2.928	1.095	2.7.2	Consult with industrial and educational advisory board
3	2.555	1.219	2.7.1	Plan for student evaluation of courses and programs
4	2.000	2.575	2.7.4	Maintain a program-level instruction evaluation log book

Rank Order	Median (mdn)	IQR	Code	Tasks
5	1.785	1.085	2.7.5	Prepare follow up studies of graduates of the program
5	2.411	1.822	2.5	Develop new and existing programs in terms of expected task outcomes.
1	3.812	1.018	2.5.5	Select tasks for which education and training are to be provided in the industrial education program(s)
2	2.343	1.640	2.5.3	Develop program-level objectives
3	2.318	1.651	2.5.6	Correlate the industrial education program as a sub-system of the total educational program
4	2.312	1.468	2.5.4	Establish criteria for selection of tasks for education and training programs
5	2.055	0.666	2.5.1	Develop program-level rationale(s)
6	2.000	1.342	2.5.2	Develop program-level mission statement(s)
6	2.390	1.610	2.8	Develop implementation strategies for new programs and changes in existing program.
1	3.875	2.062	2.8.2	Read current literature on educational change and change strategy
2	3.000	1.145	2.8.3	Re-examine the rationale and fully develop the reasons (advantages) for making proposed changes
3	2.954	1.600	2.8.4	Consider the cultural values and past experiences of those persons who are supposed to make the change so that it is compatible to these values and experiences
4	2.916	0.975	2.8.8	Develop alternate change strategies for program implementation
5	2.300	1.614	2.8.9	Establish timetable for program change implementation
6	2.250	1.491	2.8.11	Evaluate the effect of planned change on other curriculum areas and on the total curriculum
7	2.142	0.690	2.8.10	Prepare budget for proposed program changes
8	2.416	1.937	2.8.5	Identify "opinion leaders" and enlist their support of proposed changes at the program level
9	2.000	1.250	2.8.1	Establish curriculum implementation practices and sequence to move progressively from the existing system, through phases, into the planned system
10	1.722	1.288	2.8.6	Plan an educational program for those who will implement the change so that the program and its ramifications are clearly understood

Rank Order	Median (mdn)	IQR	Code	Tasks
11	1.714	1.616	2.8.7	Plan an educational program for the consumers of a proposed change so that they may see the value of the change
7	2.354	1.489	2.6	Collect tasks into appropriate instructional groups for teaching. (e.g., courses, units, etc.)
1	3.000	2.200	2.6.4	Develop objectives for course(s) consistent with program-level objectives
2	2.409	1.584	2.6.1	Identify student populations to be served as a basis for determining program experiences
3	2.400	1.266	2.6.2	Develop rationale for course(s) consistent with program-level rationale
4	2.088	0.764	2.6.3	Develop mission statement for course(s)
8	1.816	1.537	2.3	Study group cultures and principles of learning in order to relate instruction to the individuals for whom the program and and instruction is being planned.
1	2.285	1.714	2.3.3	Identify appropriate learning principles for target populations at the program level
2	1.900	1.250	2.3.2	Examine the characteristics of group cultures to improve understanding of attitudes, needs, and interests of those making up the culture for program-level input
3	1.392	1.232	2.3.1	Identify various group cultures that may compose target pupulations for programs

Rank Order	Median (mdn)	IQR	Code	Tasks
9	2.484	2.695	7.0	PROVIDE PROFESSIONAL SERVICE
1	3.591	1.967	7.1	Advise and counsel students.
1	4.593	1.185	7.1.8	Assist students with personal and occupational problems
2	4.300	1.200	7.1.3	Recognize potential problems of students
3	4.142	1.673	7.1.6	Assist students in developing good study habits
4	4.100	0.991	7.1.1	Provide students with occupational information
5	4.041	1.239	7.1.4	Hold individual student conferences
6	4.000	1.589	7.1.7	Work with guidance counselors in assisting students
7	3.318	1.272	7.1.11	Involve resource persons and agencies in assisting students
8	2.777	1.648	7.1.5	Confer with parents concerning student educational development
9	2.666	2.642	7.1.2	Administer subject matter diagnostic tests
10	2.277	1.333	7.1.9	Write letters of recommendation
11	2.250	2.082	7.1.10	Assist students in securing and filling out job applications
2	3.204	1.534	7.4	Offer professional advice.
1	3.562	1.812	7.4.1	Make laboratory and facility planning suggestions
2	3.353	1.218	7.4.2	Suggest program and instruction improvements
3	2.800	1.328	7.4.3	Relate to administrators and school board to keep them informed of trends and new developments
3	2.955	3.230	7.3	Assist in general school duties.
1	4.676	1.388	7.3.2	Participate in non-instructional school duties
2	2.875	2.148	7.3.1	Assist new teachers in system to understand policies, regulations and social functions of school
3	1.400	2.300	7.3.4	Sponsor student club activities
4	1.375	2.062	7.3.3	Serve as class advisor
4	2.106	1.615	7.2	Participate in service activities of the educational and civic community.
1	2.642	2.000	7.2.1	Serve on and chair school and community committees

Rank Order	Median (mdn)	IQR		Tasks
2	2.500	1.523	7.2.2	Actively join in local, state, and national education activities
3	1.636	1.187	7.2.3	Initiate and organize special community service committees as needed
4	1.600	1.208	7.2.4	Participate in school accreditation visits
5	1.486	2.714	7.7	Supervise student teachers.
1.5	2.500	3.222	7.7.6	Demonstrate effective techniques and methods for observation
1.5	2.500	2.466	7.7.9	Make formal evaluations of student-teacher's performance
3	2.250	3.537	7.7.8	Offer criticism, encouragement and suggestions in joint evaluation with student-teacher
4	2.125	2.222	7.7.1	Provide student-teacher with orientation to the school, classroom and community
5	1.428	3.944	7.7.7	Observe student teachers' performance in the classroom
6	1.400	1.800	7.7.2	Prepare the class for the arrival of student teachers
7	1.300	1.600	7.7.3	Assign teaching responsibilities to student teacher
8	1.218	2.703	7.7.5	Hold conferences with student teacher regarding his performance, progress and problems
9	1.125	0.625	7.7.4	Create situations so that the student teacher can initiate the instruction activities
6	1.402	1.605	7.6	Contribute to literature of the field through technical and/or professional writing.
1	2.642	1.555	7.6.1	Write proposals appropriate to needs of the discipline
2	1.233	0.933	7.6.3	Develop written instructional materials for publication
3	1.083	0.583	7.6.2	Write reviews of new tests, instructional aids, and media for education journals
7	1.227	0.975	7.5	Develop programs of professional service.
1	1.428	1.785	7.5.2	Develop adult evening extension programs
2	1.312	1.031	7.5.1	Organize and conduct workshps and in-service educational programs
3	1.250	1.000	7.5.3	Initiate remedial and summer programs for students

Rank Order	Median (mdn)	IQR	Code	Tasks
4	1.086	0.586	7.5.4	Serve as advisor to educational suppliers in development of new resources and instructional materials

Rank Order	Median (mdn)	IQR	Code	Tasks
10	1.877	1.750	8.0	UTILIZE RESEARCH
1	2.940	2.109	8.1	Identify needs (problems) amenable to research.
1	4.500	1.750	8.1.2	Identify cases and unfulfilled needs which contribute to classroom problems
2	3.166	2.000	8.1.4	Review available research applicable to identified problem
3	2.500	1.372	8.1.1	Develop an awareness of the need for solving educational problems through research
4	1.750	1.583	8.1.3	Estimate and evaluate factors such as time, cost and value as a basis for selection of a research problem
2	2.500	1.378	8.7	Apply decision-making process to the solution of instructional problems.
1	2.954	1.142	8.7.3	Take action based on decision from research evidence
2	2.681	1.222	8.7.1	Analyze potential courses of action applicable to needs (problems) as suggested by research results
3	2.166	1.333	8.7.2	Make decisions on courses of action to be taken based on research evidence
4	2.100	1.116	8.7.4	Evaluate action taken based on research findings
3	2.250	1.687	8.5	Cooperate in research effort of others.
1	2.916	1.285	8.5.2	Assess and respond to educational research instruments
2	2.428	1.452	8.5.1	Assist in implementation and evaluation of innovative programs
3	1.250	0.916	8.5.3	Organize and set-up pilot programs in cooperation with other researchers
4	2.152	1.726	8.3	Conduct proposed research.
1	2.450	1.775	8.3.3	Draw conclusions and project implications based on analysis of research data
2	2.125	0.979	8.3.2	Analyze and interpret data collected for research studies
3	1.600	1.893	8.3.1	Collect research data by appropriate methods, e.g., historical, discriptive, experimental

Rank Order	Median (mdn)	IQR	Code	Tasks
5	1.766	1.632	8.6	Read and interpret research findings both as a consumer and as a researcher.
1	2.571	1.816	8.6.7	Determine potential application and usefulness of research findings to his own situation
2	2.444	1.536	8.6.5	Review the analysis of research data
3	1.900	1.250	8.6.1	Read the research report and identify the major parts
4	1.666	1.292	8.6.2	Inspect research reports for adequate descriptions of the major elements of the research study
5	1.428	1.085	8.6.3	Evaluate the sampling procedures of research reports
6	1.222	1.138	8.6.6	Evaluate the conclusions of a research report
7	1.218	1.057	8.6.4	Assess the validity and reliability of research procedures
6	1.419	1.312	8.2	Prepare proposals for researching a problem.
1	2.250	2.533	8.2.6	Select or develop an instrument appropriate to a researchable problem
2	2.041	1.348	8.2.3	Formulate objectives or hypotheses to be answered through research study
3	1.687	1.520	8.2.1	Develop a concise statement of the research problem
4	1.538	1.038	8.2.9	Submit research proposal to appropriate funding bodies
5	1.375	1.962	8.2.7	Develop a management strategy for the control of the research study
6	1.357	1.071	8.2.4	Select and describe the research design to be used in a proposed research study
7	1.266	1.179	8.2.5	Select a population for a particular research study
8	1.233	0.847	8.2.8	Prepare a budget estimate in fiscal terms for a research study
9	1.062	0.562	8.2.2	Write a rationale for a research study including a review of literature
7	1.194	0.814	8.4	Write research reports.
1	1.423	1.371	8.4.2	Formally review and revise preliminary draft of research report
2	1.184	0.757	8.4.1	Complete preparation of preliminary draft of research report, e.g.; introduction, methods, body, conclusions, implications, bibliography, appendices
3	1.068	0.568	8.4.3	Complete final draft of research report

APPENDIX B

IMPORTANCE OF TASKS

Tasks of Wisconsin Capstone Industrial Education Teachers Ranked by Median (Mdn) Value of their Response to "Task Importance" and Including Interquartile Range (IQR)

Rank Order	Median (mdn)	IQR	Code	Tasks
1	4.438	1.372	5.0	FACILITATE LEARNING
1	4.578	1.220	5.5	Teach the substantive content of the field
1	4.789	0.823	5.5.3	Provide experiences for some students to prepare them for entry into appropriate industrially related occupations or to develop a base for advanced occupational education
2	4.722	1.361	5.5.5	Provide experiences which contribute to the teaching of students to use processes, e.g.; perceiving, communicating, learning, decision-making, organizing, co-responding, creating, valuing, problem-solving
3	4.576	1.252	5.5.1	Provide experiences which will contribute to the student's understanding of industry as a major element in our culture
4	4.423	1.076	5.5.2	Provide exploratory experience related to industry which will provide some students a basis for selecting an occupation and will provide all students respect for the pursuits of others
5	4.142	1.725	5.5.4	Provide experiences which some students may use as a base for developing avocational activities
2	4.577	1.252	5.1	Execute instructional plans and strategies.
1	4.913	0.586	5.1.5	Be aware of whether students are working safely and take appropriate preventative and corrective measures
2	4.800	0.849	5.1.1	Identify individual needs of students
3	4.781	0.890	5.1.4	Present lessons and related demonstrations
4	4.705	0.964	5.1.3	Make students aware of instructional intent and proposed outcomes of instruction
5	4.100	1.250	5.1.6	Use educational resources in executing instructional plans
6	3.928	1.095	5.1.2	Find out what students expect from the instruction
7	3.555	1.229	5.1.7	Conduct field trips and other outside-class activities

Rank Order	Median (mdn)	IQR	Code	Tasks
3	4.537	1.369	5.3	Interact with students in a positive manner.
1.5	4.850	0.650	5.3.3	Express interest in students
1.5	4.850	0.650	5.3.8	Express enthusiasm for your students and the subject matter
3	4.833	0.666	5.3.7	Provide students with clear understandings of what is expected of them and what they can expect from their teacher
4	4.705	1.144	5.3.1	Use processes of perceiving, communicating, knowing, co-responding patterning, decision-making, creating, valuing, problem solving, and learning in interacting with students
5.5	4.653	1.160	5.3.2	Establish atmosphere for positive group interaction
5.5	4.653	1.276	5.3.11	Use knowledge of students as a basis for positive interaction during instruction
7	4.642	1.238	5.3.10	Demonstrate an attitude of fairness and commitment on issues important to students
8	4.192	1.146	5.3.5	Plan individualized instruction with students
9	4.100	1.250	5.3.6	Use student interests in planning student activity
10	4.090	1.368	5.3.4	Make provision for student input into instruction
11	3.208	1.504	5.3.9	Recognize and interact with subcultures unique to the student population
4	4.234	1.380	5.2	Motivate students.
1	4.777	0.938	5.2.3	Vary classroom routine to prevent monotony and boredom
2	4.750	0.958	5.2.2	Win the students' attention and maintain level of arousal
3	4.687	1.177	5.2.6	Reward student achievement
4	4.300	1.030	5.2.8	Provide students immediate feedback to tests
5	3.950	1.250	5.2.5	Recognize and encourage evidences of response to internal motivation
6	3.884	1.096	5.2.7	Recognize and react to behavior which merits no reward
7	3.600	1.944	5.2.1	Determine the entering dispositions of individual students
8	3.571	1.613	5.2.4	Recognize and encourage evidences of response to external motivation

Rank Order	Median (mdn)	IQR	Code	Tasks
5	4.202	1.543	5.4	Adjust plans and strategies based on observed feedback from students.
1	4.625	1.187	5.4.2	Modify instructional methods in the light of student feedback
2	4.600	1.425	5.4.6	Capitalize on spontaneous student interests
3	4.277	1.353	5.4.4	Revise time allocations for instructional plans and strategies based on student feedback
4	4.111	1.481	5.4.3	Adjust the learning environment (facilities) to provide optimum learning conditions
5	4.090	1.110	5.4.7	Make final decisions on placement of instructional sequences for optimum effectiveness
6.5	4.000	1.386	5.4.8	Be sensitive to non-verbal feedback
6.5	4.000	1.888	5.4.1	Be sensitive to solicited and unsolicited student feedback
8	3.900	1.833	5.4.5	Recognize and respond to external factors which influence planned instruction

Rank Order	Median (mdn)	IQR	Code	Tasks
2	4.312	1.563	6.0	MANAGEMENT LEARNING ENVIRONMENT
1	4.552	1.179	5.3	Provide for maintenance.
1	4.678	1.053	6.3.1	Develop and carry out a routine preventative maintenance schedule
2	4.566	1.283	6.3.2	Diagnose maintenance problems in tools and equipment
3	4.535	1.038	6.3.4	Test and adjust tools and equipment prior to returning them to use after maintenance
4	4.125	1.725	6.3.3	Provide for maintenance by servicing or referral for service as appropriate
2	4.547	1.240	5.5	Respond to social-emotional climate.
1	4.794	0.847	6.5.2	Demonstrate firmness, fairness and consistency in dealing with discipline problems
2	4.705	1.252	6.5.4	Use rewards and punishment to control deviant behavior
3	4.653	1.076	6.5.7	Establish rapport and empathy with students
4	4.541	1.045	6.5.5	Be responsive to human needs of student
5	4.437	1.450	6.5.3	Develop alternate strategies for alleviating conditions which cause discipline problems
6	4.208	1.118	6.5.6	Use self-evaluation techniques regarding your inter-relationship with students
7	3.900	1.625	6.5.1	Identify internal and external causes of discipline problems
3	4.420	1.900	6.4	Maintain records and filing systems.
1	4.781	1.265	6.4.4	Keep a record of purchase orders and inventories
2	4.705	1.252	6.4.7	Keep an up-to-date industrial and educational supply catalog file
3	4.642	1.142	6.4.2	Keep student progress records for each class
4	4.500	2.250	6.4.1	Keep attendance records for each class taught
5	4.375	1.395	6.4.5	Keep records of student grades for each class taught
6.5	3.000	2.125	6.4.3	Keep equipment and tool inventories
6.5	3.000	2.687	6.4.6	Keep records of federal and state funding programs

Rank Order	Median (mdn)	IQR	Code	Tasks
4	4.190	1.554	6.2	Requisition and receive supplies and materials.
1	4.444	1.286	6.2.2	Prepare budgets for formal approval
2	4.400	1.685	6.2.4	Receive and check in supplies and materials
3	4.227	1.272	6.2.3	Order new educational materials and supplies
4	3.166	1.925	6.2.1	Take inventory of supplies and materials
5	4.057	1.739	6.1	Plan for and organize the facilities needed for the program.
1	4.576	1.163	6.1.4	Consult catalogs of industrial and educational supplies for specification of equipment available
2	4.437	1.387	6.1.7	Make an immediate and long range plan for acquisition of equipment and tools
3	4.428	1.370	6.1.8	Prepare, submit, and defend budget requests for equipment and tools
4	4.125	1.649	6.1.3	Plan layout for effective space utilization to meet program needs
5	3.800	2.843	6.1.1	Identify and develop an industrial education program and the facility to house it
6	3.791	1.312	6.1.5	Prepare a list of specific equipment and tools appropriate to program level and needs
7	3.333	2.079	6.1.6	Write specifications for equipment and tools
8	3.166	1.333	6.1.2	Write a program statement for your shop or laboratory
6	3.875	1.860	6.6	Establish physical conditions conducive to learning.
1	4.615	1.164	6.6.3	Establish classroom procedures which avoid confusion and provide freedom of movement to students
2	4.333	1.166	6.6.1	Maintain control of comfortable temperature, lighting, and noise levels in classrooms and laboratories
3	2.900	1.476	6.6.2	Take actions to enhance the room interior with displays, bulletin boards, etc.

Rank Order	Median (mdn)	IQR	Code	Tasks
3	4.055	1.711	4.0	NURTURE HUMANENESS
1	4.530	1.357	4.1	Nurture humaneness with students.
1	4.857	0.642	4.1.2	Admit that teachers also make mistakes and learn from them
2	4.809	0.761	4.1.10	Provide personal guidance to students
3	4.777	0.826	4.1.5	Take time to listen to students and acknowledge their ideas and commitments as being worthy of expression
4	4.722	1.211	4.1.9	Encourage students to know that they are respected as individuals
5	4.705	1.644	4.1.1	Encourage students to think of alternatives and to recognize knowledge as imperfect, incomplete, and tentative
6	4.625	1.395	4.1.3	Maintain atmosphere where adventure in learning is encouraged without fear of consequences of failure
7	4.400	1.154	4.1.11	Extend the positive student-teacher relationship to include informal contacts
8	4.357	0.971	4.1.4	Encourage, recognize and acknowledge original ideas of students--even though imperfect and unfinished
9	3.700	1.399	4.1.8	Develop group and team learning situations to foster in students a mutual concern for one another
10	3.687	1.437	4.1.6	Help students interpret their relationship to their environment
11	3.055	1.791	4.1.7	De-emphasize inter-student competition in the classroom as a basis for student achievement
2	4.125	1.600	4.4	Nurture humaneness to one's self.
1	4.500	1.375	4.4.2	Reassess personal objectives and take action to continue growth towards self-actualizing
2	3.937	1.611	4.4.1	Employ teacher traits in balance between those required for individual self-fulfillment and those required for successful teaching
3	3.731	1.813	4.2	Nurture humaneness with the school staff.
1	4.800	0.849	4.2.5	Employ tact and judgment in interacting with other school staff members

Rank Order	Median (mdn)	IQR	Code	Tasks
2	4.166	1.791	4.2.1	Accept assistance from and give assistance to fellow staff members
3	3.687	1.560	4.2.6	Offer recommendations in matters of school policy
4	3.500	2.066	4.2.4	Serve on and cooperate with school staff committees
5	3.437	1.531	4.2.2	Obtain and lend assistance to school projects being developed by other staff members
6	3.000	1.225	4.2.3	Participate in school staff social events
4	3.623	1.598	4.3	Nurture humaneness with parents and community.
1	3.928	2.416	4.3.5	Identify and respect goals parents have for their children
2	3.727	1.372	4.3.6	Become familiar with services provided by the community, e.g.; public library, museums, other schools, cultural center, etc.
3	3.642	1.198	4.3.4	Make provisions for personal contacts with parents concerning the progress of their children
4	3.625	1.455	4.3.7	Work with community service personnel, e.g.; Librarians, social workers, clergy, training schools
5	3.583	2.091	4.3.1	Participate in community activities and service organizations
6	3.388	1.638	4.3.3	Participate in parent-teacher functions
7	3.300	1.466	4.3.2	Evidence interest in graduated students

Rank Order	Median (mdn)	IQR	Code	Tasks
4	4.004	1.618	1.0	IMPROVE INDIVIDUAL'S COMPETENCIES
1	4.097	1.539	1.3	Use self-evaluation techniques.
1	4.625	1.395	1.3.2	Participate in self-evaluation techniques
2	4.500	1.166	1.3.1	Select a teaching position for which you feel qualified
3	4.090	1.300	1.3.4	Periodically self-reflect and evaluate education and life philosophies
4	3.388	1.402	1.3.3	Consult supervisory and administrative evaluations for self-improvement
2	4.203	1.591	1.1	Provide for re-generation and development of competencies.
1.5	4.500	1.666	1.1.2	Improve your technical skills
1.5	4.500	1.416	1.1.3	Independently accept and solve technical and other problems related to teaching assignments
3	4.166	1.688	1.1.4	Accept professional assignments
4	4.125	1.613	1.1.1	Regenerate teaching skills and strategies
5	4.000	1.468	1.1.5	Improve skills of interaction with others
3	3.816	1.554	1.2	Keep up with development in the field.
1	4.576	1.163	1.2.2	Read current professional literature for self-improvement
2	4.222	1.277	1.2.3	Pursue further formal technical and professional education for self-improvement
3	3.700	1.733	1.2.5	Visit industries and consult with professional and technical personnel
4	3.625	1.343	1.2.4	Maintain membership in professional and technical organizations
5	3.500	1.583	1.2.1	Attend in-service seminars and workshops
6	3.321	1.290	1.2.6	Subscribe to educational and technical journals

Rank Order	Median (mdn)	IQR	Code	Tasks
5	3.985	1.534	3.0	DESIGN INSTRUCTION
1	4.568	1.310	3.5	Select teaching activities and strategies.
1	4.705	1.252	3.5.3	Make decisions concerning the extent to which the instruction is to be individualized
2	4.625	1.187	3.5.2	Integrate learning and teaching activities into instructional plans
3	4.300	1.316	3.5.1	Plan strategies for teaching including meeting the needs of special groups
2	4.246	1.226	3.4	Develop (or identify) student learning activities appropriate to each behavioral objective (make the content operational).
1	4.722	0.944	3.4.6	Plan experiences which will contribute to teaching students how to use processes, e.g.; perceiving, communicating, learning, decision making, organizing, co-responding, creating, valuing, problem solving
2	4.600	1.075	3.4.4	Plan experiences for some students which will prepare them for entry into industrially related occupations or to develop a base for advance occupational education
3	4.250	1.186	3.4.5	Plan experiences which some students may use as a base for developing avocational activities
4	4.153	0.967	3.4.3	Plan exploratory experiences related to industry which will provide some students a base for occupational choice and all students a respect for the pursuits of others
5	4.125	1.763	3.4.2	Plan experiences which will contribute to the students' understanding of industry as a major element in our culture
6	4.000	0.857	3.4.7	Develop alternative learning activities to provide for individual student needs
7	3.333	1.250	3.4.1	Consult resources to identify learning activities
3	4.053	1.425	3.6	Identify and prepare instructional resources.
1	4.833	0.666	3.6.5	Prepare instructional materials
2	4.045	1.037	3.6.3	Review and select audio-visual resources

Rank Order	Median (mdn)	IQR	Code	Tasks
3	3.800	1.571	3.6.2	Review and select industrial resources
4	3.611	1.402	3.6.4	Review and select written resources for instruction
5	3.333	1.375	3.6.1	Review and select personnel resources
4	3.988	1.514	3.1	Write performance objectives for each course.
1	4.250	1.196	3.1.4	Identify performance standard for performance objectives
2	4.214	1.085	3.1.2	Identify student behavior or product of student behavior
3	4.062	1.774	3.1.3	Identify conditions under which student behavior modification will take place
4	3.825	1.455	3.1.5	Write the performance objective at the appropriate level and domain
5	3.642	1.523	3.1.1	Identify student population who will receive instruction
5	3.963	1.399	3.7	Develop a strategy for evaluating instruction.
1	4.500	1.136	3.7.2	Formulate a grading policy and plans for making it known to students
2	4.045	1.142	3.7.4	Plan for written and manipulative performance tests
3	3.821	1.553	3.7.3	Plan for self-evaluation techniques to be used by students
4	3.750	1.962	3.7.1	Decide whether evaluation will emply norm-based or mastery grading procedures
5	3.625	1.548	3.7.5	Plan for student evaluation of course
6	3.962	1.670	3.9	Prepare lesson plans for group and individualized instruction.
1	4.823	0.724	3.9.2	Identify and select learning acitvities for students
2	4.428	1.443	3.9.7	Sequence presentation of instructional materials
3	4.111	0.777	3.9.4	Identify and select appropriate learning resources
4	3.583	1.749	3.9.3	Identify and select appropriate teacher activities
5	3.500	1.575	3.9.6	Keep records of lessons planned and suggestions for improvement
6	3.388	1.492	3.9.5	Validate content against levels within domains for lesson plans
7	3.100	2.166	3.9.1	Write objectives for lesson plans

Rank Order	Median (mdn)	IQR	Code	Tasks
7	3.750	1.515	3.2	Organize objectives into appropriate sequences.
1	4.066	1.010	3.2.2	Group and sequence performance objectives into appropriate units of instruction
2	3.062	1.866	3.2.1	Identify which objectives are dependent on other objectives for their attainment
8	3.714	1.522	3.3	Validate content against domains and against levels within domains.
1	4.142	1.593	3.3.3	Make adjustments to content within domains to obtain needed balance
2	4.050	1.428	3.3.6	Make any needed adjustments to content by levels within each domain
3	3.700	1.975	3.3.5	Observe whether the desired levels within domains are represented and what their balance is
4	3.611	1.277	3.3.1	Decide whether each domain should be represented and the balance of content which should be devoted to each
5	3.500	1.316	3.3.4	Decide which levels within each domain should be represented and the balance of content that should be devoted to each
6	3.000	1.000	3.3.2	Observe that the desired domains are represented and what their balance is
9	3.484	1.492	3.8	Organize and complete the course of study.
1	3.818	1.338	3.8.3	Prepare a time-range plan suggesting a range of time allotted to each unit of instruction
2	3.600	2.000	3.8.4	Arrange for the preparation of total course of study copy and subsequent distribution
3	3.333	1.464	3.8.2	Write course description
4	3.222	1.380	3.8.1	Write introduction to course of study

Rank Order	Median (mdn)	IQR	Code	Tasks
6	3.816	1.429	10.0	EVALUATE PROGRAMS
1	4.458	1.228	10.4	Determine effectiveness of program implementation.
1	4.333	1.354	10.4.5	Assess appropriateness of learning activities to the program
2	4.291	1.157	10.4.4	Assess adequacy of instructional materials for carrying out learning activities at the program level
3	4.136	1.300	10.4.6	Review sequences of courses comprising the program
4	4.125	0.937	10.4.3	Determine appropriateness of course objectives in fulfilling student needs at the program-level
5	4.000	1.342	10.4.2	Evaluate quality of instruction and teacher-student interrelationship within the program
6	3.850	1.312	10.4.1	Assess validity of original sources of curriculum content at the program level
2	3.960	1.279	10.3	Determine output characteristics of students.
1	4.500	1.136	10.3.1	Assess the degree of student achievement of program objectives
2	3.928	1.178	10.3.3	Determine the degree to which the industrial education program satisfies societal, industrial and individual needs
3	3.892	1.083	10.3.5	Determine whether students enjoy the curriculum and are generally happy with it
4	3.750	1.233	10.3.4	Compare present students achievement with previous student achievements in the program
5	3.625	1.437	10.3.2	Review program-level follow-up studies to ascertain the usefulness of material learned
3	3.745	1.296	10.2	Assess factors influencing program.
1	4.062	0.875	10.2.3	Review adequacy and utilization of facilities for program
2	3.964	0.988	10.2.1	Determine interests, abilities and experiences of students entering the program
3	3.416	1.208	10.2.4	Determine utilization made of community resources in program-level development
4	3.350	1.453	10.2.2	Review teacher competencies with respect to program-level goals
5	3.333	1.375	10.2.5	Determine the degree of articulation with general, college preparatory and vocational programs

Rank Order	Median (mdn)	IQR	Code	Tasks
4	3.343	1.569	10.1	Collect information at the program-level.
1	4.000	1.700	10.1.6	Consult advisory committees to determine quality of instructional program
2	3.333	1.412	10.1.3	Select (or design) and administer cognitive (knowledge) tests for evaluation of program
3	3.318	1.227	10.1.1	Conduct program-level follow-up study
4	3.300	1.708	10.1.2	Design and administer forms for evaluation of programs by students
5	3.272	1.690	10.1.7	Interact with and evaluate professional program-level curriculum viewpoints
6	3.000	2.381	10.1.5	Select (or design) and administer tests of psychomotor abilities for evaluation of programs
7	2.944	0.777	10.1.4	Select (or design) and administer tests of attitudes for evaluation of the program

Rank Order	Median (mdn)	IQR	Code	Tasks
7	3.673	1.695	9.0	EVALUATE INSTRUCTION
1	4.280	1.315	9.1	Assess whether students have assimilated the material presented.
1	4.350	1.262	9.1.3	Apply methods to be used to evaluate instruction
2	4.250	1.666	9.1.1	Use the evaluation policy which was previously made known to students
3	4.214	1.085	9.1.2	Determine whether students met performance standards
2	3.816	1.483	9.4	Determine efficiency and effectiveness of instruction.
1	4.363	1.187	9.4.5	Appraise student performance in relation to instructional goals
2	4.000	1.401	9.4.1	Analyze and interpret results of instructional measurement
3	3.884	0.907	9.4.6	Determine whether students are generally happy with the instruction received
4	3.812	1.505	9.4.2	Consult with colleagues regarding assessment of your teaching
5	3.178	1.366	9.4.4	Compare pretest and posttest results
6	3.166	1.416	9.4.3	Analyze student evaluation of instruction
3	3.453	1.944	9.2	Construct and evaluate measuring instruments and procedures.
1	3.916	1.333	9.2.2	Formulate devices to measure cognitive (knowledge-type) behavior
2	3.812	1.505	9.2.7	Evaluate tests in terms of useability, objectivity, difficulty, and discrimination
3	3.800	1.533	9.2.4	Formulate devices to measure psychomotor (manipulative skill type) behavior
4	3.666	1.333	9.2.1	Devise self-evaluation techniques for use by students
5.5	3.500	2.333	9.2.5	Develop pretests and posttests
5.5	3.500	1.375	9.2.6	Analyze test instrument validity and reliability
7	3.125	2.250	9.2.3	Formulate devices to measure affective behavior (e.g., attitudes and values)
8	1.384	1.164	9.2.8	Use computer to assist in analyzing test results

Rank Order	Median (mdn)	IQR	Code	Tasks
4	3.354	1.483	9.3	Administer evaluative experiences.
1	4.000	1.085	9.3.3	Administer written and manipulative performance tests
2	3.312	1.614	9.3.4	Maintain a daily instruction evaluation log book
3	3.272	1.448	9.3.2	Conduct student self-evaluation procedures
4	3.000	2.000	9.3.1	Administer pretests and posttests
5	2.500	2.000	9.3.5	Administer standardized tests

Rank Order	Median (mdn)	IQR	Code	Tasks
8	3.585	1.609	2.0	DESIGN PROGRAMS
1	3.791	1.524	2.2	Study the institution of industry within our society as a source of the body of knowledge for industrial education.
1	4.166	1.022	2.2.1	Read magazines and journals that focus on industry as part of the study of the institution of industry
2.5	4.000	1.531	2.2.2	Decide upon basic functions of industry to be studied in the program
2.5	4.000	1.812	2.2.7	Study labor in industry as a basis for program-level curriculum development
4	3.950	1.437	2.2.3	Visit and observe representative industries as a source of the body of content for industrial education
5	3.909	1.410	2.2.9	Establish tentative program-level goals for industrial education in relation to industry
6	3.812	1.691	2.2.5	Develop and maintain an up to date industrial resource file
7	3.800	1.031	2.2.4	Consult available industrial personnel as part of the study of the institution of industry
8	3.300	1.733	2.2.6	Identify past, present and probable future impacts of industry on society
9	2.550	1.500	2.2.8	Select published taxonomy or develop a taxonomy of industry
2	3.750	1.506	2.4	Analyze the study of society, industry and the individual to identify the problems and human needs toward which industrial education can make contributions.
1	4.000	1.406	2.4.1	Identify societal, industrial and individual problems toward which industrial education can contribute
2	3.930	1.477	2.4.3	Examine previously proposed solutions and use or propose solutions to problems and ways to meet human needs through the program
3	3.875	1.062	2.4.4	Identify the jobs that need to be done toward which an industrial education program can contribute
4	3.722	2.088	2.4.6	Structure the content from which to draw for program-level curriculum development
5	3.500	1.375	2.4.5	Detail each job to be done in industrial education in terms of tasks to be performed for program-level curriculum development
6	3.214	1.800	2.4.2	Identify human needs including those of differing cultures

Rank Order	Median (mdn)	IQR	Code	Tasks
3	3.646	1.520	2.5	Develop new and existing programs in terms of expected task outcomes.
1	4.050	1.406	2.5.3	Develop program-level objectives
2	4.045	1.270	2.5.5	Select tasks for which education and training are to be provided in the industrial education program(s)
3	3.681	1.386	2.5.4	Establish criteria for selection of tasks for education and training programs
4	3.611	1.488	2.5.6	Correlate the industrial education program as a sub-system of the total educational program
5	3.375	1.395	2.5.1	Develop program-level rationale(s)
6	2.800	1.900	2.5.2	Develop program-level mission statement(s)
4	3.558	1.654	2.6	Collect tasks into appropriate instructional groups for teaching (e.g., courses, units, etc.)
1	4.541	1.270	2.6.4	Develop objectives for course(s) consistent with program-level objectives
2	3.625	1.321	2.6.2	Develop rationale for course(s) consistent with program-level rationale
3	3.388	1.520	2.6.1	Identify student populations to be served as a basis for determing program experiences
4	3.000	1.000	2.6.3	Develop mission statement for course(s)
5	3.571	1.593	2.7	Develop a plan for continual revision and improvement of programs.
1	4.045	1.347	2.7.3	Keep up with new literature related to general and industrial education for program improvement
2	3.550	1.281	2.7.1	Plan for student evaluation of courses and programs
3	3.500	1.575	2.7.2	Consult with industrial and educational advisory board
4	3.291	1.666	2.7.5	Prepare follow up studies of graduates of the program
5	3.250	2.196	2.7.4	Maintain a program-level instruction evaluation log book
6	3.518	1.544	2.8	Develop implementation strategies for new programs and changes in existing program.
1	4.300	1.316	2.8.10	Prepare budget for proposed program changes
2	3.812	1.583	2.8.3	Re-examine the rationale and fully develop the reasons (advantages) for making proposed changes

Rank Order	Median (mdn)	IQR	Code	Tasks
3	3.800	1.266	2.8.8	Develop alternate change strategies for program implementation
4	3.750	1.500	2.8.2	Read current literature on educational change and change strategy
5	3.611	1.444	2.8.9	Establish timetable for program change implementation
6	3.600	1.437	2.8.11	Evaluate the effect of planned change on other curriculum areas and on the total curriculum
7	3.555	2.736	2.8.6	Plan an educational program for those who will implement the change so that the program and its ramifications are clearly understood
8	3.277	1.444	2.8.5	Identify "opinion leaders" and enlist their support of proposed changes at the program level
9	3.083	1.258	2.8.4	Consider the cultural values and past experiences of those persons who are supposed to make the change so that it is compatible to these values and experiences
10	3.071	1.053	2.8.1	Establish curriculum implementation practices and sequence to move progressively from the existing system, through phases, into the planned system
11	2.950	1.741	2.8.7	Plan an educational program for the consumers of a proposed change so that they may see the value of the change
7	3.430	1.770	2.1	Study society in general and its problems in particular to maintain and improve the relevance of industrial education goals to society.
1	4.250	1.583	2.1.10	Suggest program-level improvements in industrial education based on societal needs
2	4.000	1.507	2.1.5	Relate current problems to industrial education programs
3	3.583	1.725	2.1.4	Project trends and make predictions based on societies' problems and needs for program-level curriculum development
4	3.500	1.770	2.1.2	Listen to and interact with presentations about current status and the future as input to program-level curriculum development
5	3.444	1.704	2.1.6	Identify contributions that industrial education can make toward the solution of societal problems
6	3.428	2.071	2.1.8	Try promising approaches and alternatives to meeting the needs of society through industrial education programs

Rank Order	Median (mdn)	IQR	Code	Tasks
7	3.200	1.338	2.1.9	Establish tentative program-level goals for industrial education in relation to societal needs
8	3.166	2.571	2.1.3	Make judgments about cause and effect in relating societal problems to industrial education programs
9	3.000	1.875	2.1.1	Read and interpret current and historical literature for program-level input
10	2.875	1.607	2.1.7	Consider alternative solutions to societal problems at the program planning level
8	2.921	1.883	2.3	Study group cultures and principles of learning in order to relate instruction to the individuals for whom the program and instruction is being planned.
1	3.388	1.472	2.3.3	Identify appropriate learning principles for target populations at the program level
2	3.100	1.250	2.3.2	Examine the characteristics of group cultures to improve understanding of attitudes, needs, and interests of those making up the culture for program-level input
3	2.125	1.742	2.3.1	Identify various group cultures that may compose target populations for programs

Rank Order	Median (mdn)	IQR	Code	Tasks
9	3.504	1.857	7.0	PROVIDE PROFESSIONAL SERVICE
1	4.058	1.579	7.4	Offer professional advice.
1	4.437	1.258	7.4.2	Suggest program and instruction improvements
2	4.166	1.563	7.4.1	Make laboratory and facility planning suggestions
3	3.611	1.492	7.4.3	Relate to administrators and school board to keep them informed of trends and new developments
2	3.933	1.610	7.1	Advise and counsel students.
1	4.656	1.109	7.1.1	Provide students with occupational information
2	4.357	1.059	7.1.3	Recognize potential problems of students
3	4.333	1.354	7.1.4	Hold individual student conferences
4	4.318	1.234	7.1.8	Assist students with personal and occupational problems
5	4.250	1.186	7.1.6	Assist students in developing good study habits
6	3.863	1.311	7.1.11	Involve resource persons and agencies in assisting students
7	3.857	1.468	7.1.7	Work with guidance counselors in assisting students
8	3.692	1.318	7.1.5	Confer with parents concerning student educational development
9	3.357	1.571	7.1.9	Write letters of recommendation
10	3.166	1.642	7.1.10	Assist students in securing and filling out job applications
11	3.111	1.533	7.1.2	Administer subject matter diagnostic tests
3	3.013	1.345	7.2	Participate in service activities of the educational and civic community.
1	3.187	1.035	7.2.1	Serve on and chair school and community committees
2	2.954	1.166	7.2.2	Actively join in local, state, and national education activities
3	2.937	1.785	7.2.3	Initiate and organize special community service committees as needed
4	2.700	1.400	7.2.4	Participate in school accreditation visits
4	2.917	1.889	7.3	Assist in general school duties.
1	3.900	1.750	7.3.1	Assist new teachers in system to understand policies, regulations and social functions of school

Rank Order	Median (mdn)	IQR	Code	Tasks
2	2.900	1.678	7.3.2	Participate in non-instructional school duties
3	2.818	1.473	7.3.4	Sponsor student club activities
4	1.500	1.200	7.3.3	Serve as class advisor
5	2.730	1.805	7.7	Supervise student teachers.
1	4.250	1.659	7.7.7	Observe student teachers' performance in the classroom
2	4.200	2.031	7.7.5	Hold conferences with student teacher regarding his performance, progress and problems
3	4.000	1.392	7.7.6	Demonstrate effective techniques and methods for observation
4	3.807	1.641	7.7.2	Prepare the class for the arrival of student teachers
5	3.571	1.767	7.7.3	Assign teaching responsibilities to student teacher
6	3.375	1.454	7.7.1	Provide student teacher with orientation to the school, classroom and community
7	3.333	2.300	7.7.8	Offer criticism, encouragement and suggestions in joint evaluation with student-teacher
8	3.125	2.187	7.7.9	Make formal evaluations of student-teacher's performance
9	3.000	3.080	7.7.4	Create situations so that the student teacher can initiate the instruction activities
6	2.714	1.999	7.5	Develop programs of professional service.
1	3.125	2.172	7.5.3	Initiate remedial and summer programs for students
2	2.833	2.333	7.5.2	Develop adult evening extension programs
3	2.800	1.533	7.5.1	Organize and conduct workshops and in-service educational programs
4	2.277	1.888	7.5.4	Serve as advisor to educational suppliers in development of new resources and instructional materials
7	2.667	2.206	7.6	Contribute to literature of the field through technical and/or professional writing.
1	3.916	1.416	7.6.1	Write proposals appropriate to needs of the discipline
2	2.500	1.388	7.6.3	Develop written instructional materials for publication
3	1.937	1.887	7.6.2	Write reviews of new tests, instructional aids, and media for education journals

Rank Order	Median (mdn)	IQR	Code	Tasks
10	2.784	1.573	8.0	UTILIZE RESEARCH
1	3.267	1.530	8.1	Identify needs (problems) amenable to research.
1	4.166	1.083	8.1.2	Identify cases and unfulfilled needs which contribut to classroom problems
2	3.200	1.266	8.1.4	Review available research applicable to identified problem
3	2.875	1.187	8.1.1	Develop an awareness of the need for solving educational problems through research
4	2.416	1.312	8.1.3	Estimate and evaluate factors such as time, cost and value as a basis for selection of a research problem
2	3.122	1.160	8.7	Apply decision-making process to the solution of instructional problems.
1	3.400	1.255	8.7.3	Take action based on decision from research evidence
2	3.071	0.992	8.7.1	Analyze potential courses of action applicable to needs (problems) as suggested by research results
3.5	3.000	0.900	8.7.4	Evaluate action taken based on research findings
3.5	3.000	1.750	8.7.2	Make decisions on courses of action to be taken based on research evidence
3	2.857	1.221	8.3	Conduct proposed research.
1	3.000	1.275	8.3.3	Draw conclusions and project implications based on analysis of research data
2	2.777	1.555	8.3.1	Collect research data by appropriate methods, e.g., historical, descriptive, experimental
3	2.750	0.987	8.3.2	Analyze and interpret data collected for research studies
4	2.842	1.619	8.5	Cooperate in research effort of others.
1	3.750	1.666	8.5.1	Assist in implementation and evaluation of innovative programs
2	2.884	1,173	8.5.2	Assess and respond to educational research instruments
3	2.214	1.553	8.5.3	Organize and set-up pilot programs in cooperation with other researchers

Rank	Median	IQR	Code	Tasks
5	2.715	1.641	8.6	Read and interpret research findings both as a consumer and as a researcher.
1	3.450	1.419	8.6.7	Determine potential application and usefulness of research findings to his own situation
2	3.066	1.041	8.6.5	Review the analysis of research data
3	2.730	1.192	8.6.1	Read the research report and identify the major parts
4	2.500	1.809	8.6.6	Evaluate the conclusions of a research report
5	2.125	1.625	8.6.3	Evaluate the sampling procedures of research reports
6	2.000	1.590	8.6.2	Inspect research reports for adequate description of the major elements of the research study
7	1.750	2.013	8.6.4	Assess the validity and reliability of research procedures
6	2.507	1.611	8.2	Prepare proposals for researching a problem.
1	2.954	1.285	8.2.1	Develop a concise statement of the research problem
2	2.888	1.533	8.2.9	Submit research proposal to appropriate funding bodies
3	2.833	1.345	8.2.3	Formulate objectives or hypotheses to be answered through research study
4	2.642	2.000	8.2.6	Select or develop an instrument appropriate to a researchable problem
5	2.500	2.000	8.2.4	Select and describe the research design to be used in a proposed research study
6	2.350	1.433	8.2.7	Develop a management strategy for the control of the research study
7	2.100	2.035	8.2.8	Prepare a budget estimate in fiscal terms for a research study
8.5	2.000	1.334	8.2.2	Write rationale for a research study including a review of literature
8.5	2.000	1.514	8.2.5	Select a population for a particular research study
7	2.286	2.034	8.4	Write research reports.
1	2.714	1.714	8.4.1	Complete preparation of preliminary draft of research report, e.g.; introduction, methods, body, conclusions, implications, bibliography, appendices
2	2.100	2.000	8.4.2	Formally review and revise preliminary draft of research report
3	1.875	2.056	8.4.3	Complete final draft of research report